

Health:Green, Last Calc:04/26/2020 04:03, Power:100%, Trail Only:No

SERVICE TRACK:SV PIT

COMPLETE LMI 9429 MECHANICAL INSPECTION REPORT 01

ECZ

Fill in all answers for questions regarding this task.

1. Reason for Report[PERSONAL INJURY_____] WCH
2. Event Recorder Download Taken[YES] JBH
3. TIR Equipped [YES] JBH
- TIR Operational (Verify the REC LED is green) [YES]
4. Ditchlights Operating[YES] EKB
- Headlight Operating[YES]
- Rear Headlight Operating[YES]
5. Horn Operating [YES] WCH
- Where Mounted[CAB_____]
- Number of Trumpets Forward [2 FORWARD_____]
- Number of Trumpets Rear [1 REAR_____]
- As information:
- 3 trumpets forward, 2 reverse is model K-5LA-R24
- 1 trumpet forward, 4 reverse is model K-5LLA-R1L
- 2 trumpets forward, 1 reverse is model K3HA-R2
6. Air Brake Departure Test Completed [YES___] WCH
7. Cab Floor Condition[GOOD___] WCH
- Cab Seats Condition[GOOD___]
- Mirrors Condition[GOOD___]
- Windows Condition[GOOD___]
- Windshield Wipers Operating[YES]
8. Crossing Bell Operating [YES] WCH
- Crossing Bell [PNEUMATIC___]
- Where Mounted[ENGINEER SIDE_____]
9. Handbrake Operational[YES] WCH
10. Sand Condition[DRY] WCH
- Sand Level Front[EMPTY_____]
- Sand Level Rear[EMPTY_____]
- Sanders Operational[YES]
- Normal Sand Flow to Rail[NO_]
11. Brake Shoes Condition[GOOD___] WCH
12. Brake cylinder travel by individual cylinder WCH
- L1 [> 3.5"_____]
- L2 [3.5"_____]
- L3 [2"_____]
- L4 [3"_____]
- R1 [3"_____]
- R2 [>3.5"_____]
- R3 [>3.5"_____]
- R4 [3.5"_____]
13. Note any repairs made: WCH
- [_____]
14. Manager /Supervisor signoff that all steps have been completed for ECZ
- Mechanical Inspection Report.

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VERIFY OPERATION RCL SAFETY FEATURES

R N

When an RCL Locomotive is released from shop a functional test of the RCL system should be performed. These tests do not require movement of the locomotive. These tests are intended to test the operation of the locomotive only. Depending on the type of repairs completed, additional test involving locomotive movement may be required. The "911" tones are verified audibly for now. Soon, A Touch-Tone Decoder is used to verify "911" mandown message.

1. Functional Air Brake Test for RCL Equipped Locomotives

R N

Set Up Locomotive

Refer to LMI 7912 for CCB26 Linking Instructions (Gensets)

Step Action

- 1 Establish Blue Signal protection and set handbrake.
- 2 Perform manual air brake test as outlined in LMI 0012.
- 3 Verify that the locomotive radio is installed and cable from RCL system is applied to the radio's auxiliary connector. Set channel on locomotive radio and monitor radio to unused channel for testing,
- 4 Set up locomotive as follows:
Apply Locomotive in RCL warning tag to control stand.
Set Isolation Switch to Isolate.
Set air brake equipment to Lead, Cut in.
Turn On RCL circuit breaker.
Changeover Switch to RCL.
If required, set changeover valve to RCL position.
- 5 Link RCT.
- 6 Verify that the test message is broadcast over the locomotive radio.
- 7 Verify both amber strobe lights on locomotive cab are flashing.

2. Test RCL Independent Brakes

R N

Ensure:

RCT Independent Override Selector is in Release position.

RCT Automatic Brake Selector is in Release position.

NOTE: BELL WILL RING WHEN PERFORMING THIS TEST.

VERIFY THAT ISOLATION SWITCH IS IN ISOLATE.

Step Action

- 1 Place RCT reverser in either Forward or Reverse.
- 2 Press vigilance button on RCT.
- 3 When the speed selector is moved to Couple, the bell will ring.
- 4 Verify that Independent brakes release (0 psi).
- 5 Move Speed Selector to Stop.
- 6 Verify that independent brakes apply. Verify brake cylinder pressure is full application: 45 psi for clasp arrangement typical; 72 psi for single shoe arrangement typical.
- 7 Place RCT reverser in Neutral.
NOTE: CANAC Beltpack allows 20 seconds for this test. After 20 seconds a full independent brake application will occur.

3. Test RCL Automatic Brakes

R N

Ensure:

RCT Independent Brake Override Selector is in Release position.

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3. RCT Automatic Brake Selector is in Release position.
RCT is in Neutral. Speed Selector is in Stop.

Step	Action
1	Advance Automatic Brake Selector through each position pausing at each to allow pressures to stabilize. Setting Reduction Brake Pipe Pressure +/- 3 PSI Release
0	
90	Minimum
7 psi	
83 psi	Light
10 psi	
80 psi	Medium
15 psi	
75 psi	Full
20 psi	
70 psi	
2	Return Automatic Brake Selector to Release - BP should return 90 psi. NOTE: Auto bail feature should bail applications only in the minimum and light settings from automatic brake reductions. Medium and full setting should result in full independent brake cylinder pressure (45 psi or 72 psi depending on J valve).
4. Test RCL Emergency Brake RN
 Ensure:
 - RCT Independent Brake Override Selector is in Release position.
 - RCT Automatic Brake Selector is in Release position.
 - RCT Reverser is in Neutral.
 - RCT Speed Selector is in Stop.

Step	Action
1	Place Independent Brake Override Selector into Emergency position. Verify Brake pipe pressure rapidly falls to 0 psi. Verify Brake Cylinder pressure rises to 72-80 psi (43-48 psi on locos with clasp arrangement composition shoes - J16B relay valve).
2	To recover from emergency: Wait 30 to 50 seconds. Press Vigilance button on RCT. Move Independent Brake Override Selector to Release position PCS will reset and brake pipe pressure will recharge to 90 psi.
3	Push RCL Emergency Shut Down button on side of locomotive. Verify Brake pipe pressure rapidly falls to 0 psi. Verify Brake Cylinder pressure rises to 72 - 80 psi (43-48 psi on locos with clasp arrangement composition shoes - J16B relay valve).
4.	To recover from pushed Emergency Shut Down button comanded Emergency: Pull out Emergency Shut Down button (if maintained contact type). Push the reset button on the RCR (Cattron only). Move Independent Brake Override selector to the Emergency position. Press Vigilance button on RCT.

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4. Move Independent Brake Override selector back to the release position.
PCS will now reset and brake pipe pressure will recharge to 90 psi.
5. Test RCL Vigilance Timeout Test R N
NOTE: BELL WILL RING WHEN PERFORMING THIS TEST.
VERIFY THAT ISOLATION SWITCH IS IN ISOLATE.
Ensure:
RCT Independent Brake Override Selector is in Release position.
RCT Automatic Brake Selector is in Release position.
RCT Reverser is in Neutral.
Step Action
1 Place RCT reverser in either Forward or Reverse.
2 Press vigilance button on RCT.
3 Place Speed Selector in Coast. Crossing bell will ring.
4 Verify that after approximately 50 seconds, vigilance expires, alarm expires, and a full service brake application occurs.
6. Verify Headlight Operation R N
Set up headlight switches on locomotive before performing this test.
1 Place RCT in Neutral. Verify both headlights are in "dim".
2 Place RCT reverser in Forward; then press headlight switch once for "bright". Forward headlight should now be bright. Press headlight switch again for "off." Check for headlight "off." Then press headlight switch again to return to "dim" position.
3 Place RCT reverser in Reverse and repeat step 2 above for the reverse headlight.
7. Verify Man-Down Operation R N
1) Use a hand-held radio to monitor the locomotive radio transmissions and find an unused voice radio channel. Set the locomotive and hand-held radios to the unused channel for test.
2) Refer to LMI 7403 to verify the proper operation of the voice radio. Perform the Touch-Tone test to confirm that the Touch-Tone decoder reads all 12 (0-9, *, and #) digits sent by the voice radio.
3) Place RCT reverser in either Forward or Reverse. Move Speed to stop, verify brakes apply.
4) Press vigilance button on RCT. Key the Hand-Held radio and announce:
"UPXXXX Man-Down Test, UPXXXX Man-Down Test, UPXXXX Man-Down Test"
5) Tilt OCU and wait for Man-Down timeout. Wait for the alarm to fully activate since several warning messages may be broadcast before the 911 tones are sent.
6) Confirm that Man-Down Message, including locomotive unit number and "9-1-1" DTMF codes, are broadcast after man-down timeout. Use available Touch-Tone Decoder to verify "911" tones.
7) Key the Hand-Held radio and announce:
"UPXXXX Man-Down Test Completed, UPXXXX Man-Down Test Completed, UPXXXX out"
Continue monitoring the channel to respond to someone answering the man-down transmission.
8) Set locomotive voice radio channel back to assigned RCL voice channel.
8. Verify Antenna Operation R N
For Each Canac/Cattron or GE RCL Antenna:
Use a Bird Model 500 Antenna Tester to verify that the antenna

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8. has a SWR reading less than 1.5 at the RCL operating frequency.
OR
Confirm that the RCL System maintains the OCU to Locomotive Link while driving the RCL Operator/OCU a Distance of 1 mile from the locomotive.
9. Set Up Locomotive for Manual Operation
At the conclusion of the tests, set up the locomotive for manual operation:
Step Action
- 1 Turn RCT off. Locomotive will go to Full Service application
 - 2 If equipped, set changeover valve to Manual.
 - 3 Place the Changeover Switch to Manual. Locomotive will go to Emergency. Set Locomotive Radio Channel back to normal.
 - 4 Set up air brake equipment for Lead and recover from Emerg.
 - 5 Remove Locomotive in RCL warning tag.
 - 6 Apply full Independent brakes and make a 20 psi BP reduction
 - 7 Apply handbrake, if required, and secure RCT and reverser per local policy.

RN